

GUIDE FOR THE IDENTIFICATION OF RARE, THREATENED OR  
SENSITIVE BRYOPHYTES IN THE RANGE OF THE NORTHERN  
SPOTTED OWL, WESTERN WASHINGTON, WESTERN OREGON, AND  
NORTHWESTERN CALIFORNIA.

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Printed by the Bureau of Land Management, Oregon-Washington State  
Office, Portland, Oregon. 1996.

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**RHIZOMNIUM NUDUM** (Britt. & Williams) T. Kop.

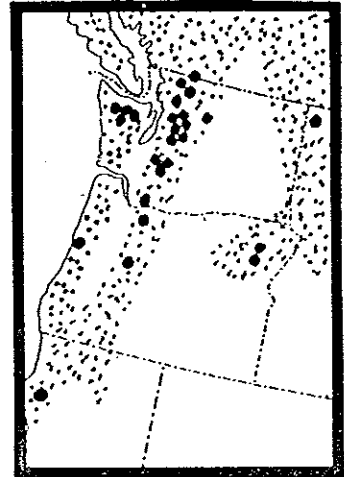
Naked round moss, Naked mniium

Recent synonyms: *Mnium nudum* Britt. & Williams

**Status:** SAT Appendix 5-H; FEMAT Appendix Table IV-A-3.

**Distribution:** Russian Far East, Japan, Alaska, British Columbia, Alberta, Washington, Idaho, Montana, Oregon, northern California.

**Habitat and ecology:** On moist but not wet organic soil, sometimes among rocks or on rotten logs, sometimes along streams, mostly in middle to high-elevation forests, ranging into alpine sites with late-persisting snow beds.



**Description:** Plants erect, unbranched, 1-5 cm tall, yellowish green to dark green, the stems reddish brown, with reddish brown rhizoids confined to base. Leaves 3-6(7) x 4-9 mm, obovate to nearly circular in outline, obtuse, lacking an apiculus; when dry, shiny and only slightly contorted; costa broad at base, usually ending before the apex; median leaf cells large, hexagonal, 50-60(70) x 85-150(170)  $\mu\text{m}$ , clearly visible with a hand lens, in cross-section with the walls between adjacent cells thickened above and below, but conspicuously thinner in the middle, like old-fashioned weightlifter's barbells. Leaf margins bordered by 2-4 rows of long, narrow cells, unistratose at tip of leaf, but of 2-4 layers below, with no teeth. Dioicous. Setae 1-3 cm long, brown. Capsule pendent, yellowish-brown, ovoid, rounded at base, 2.5-3.5 mm long, wrinkled when dry.

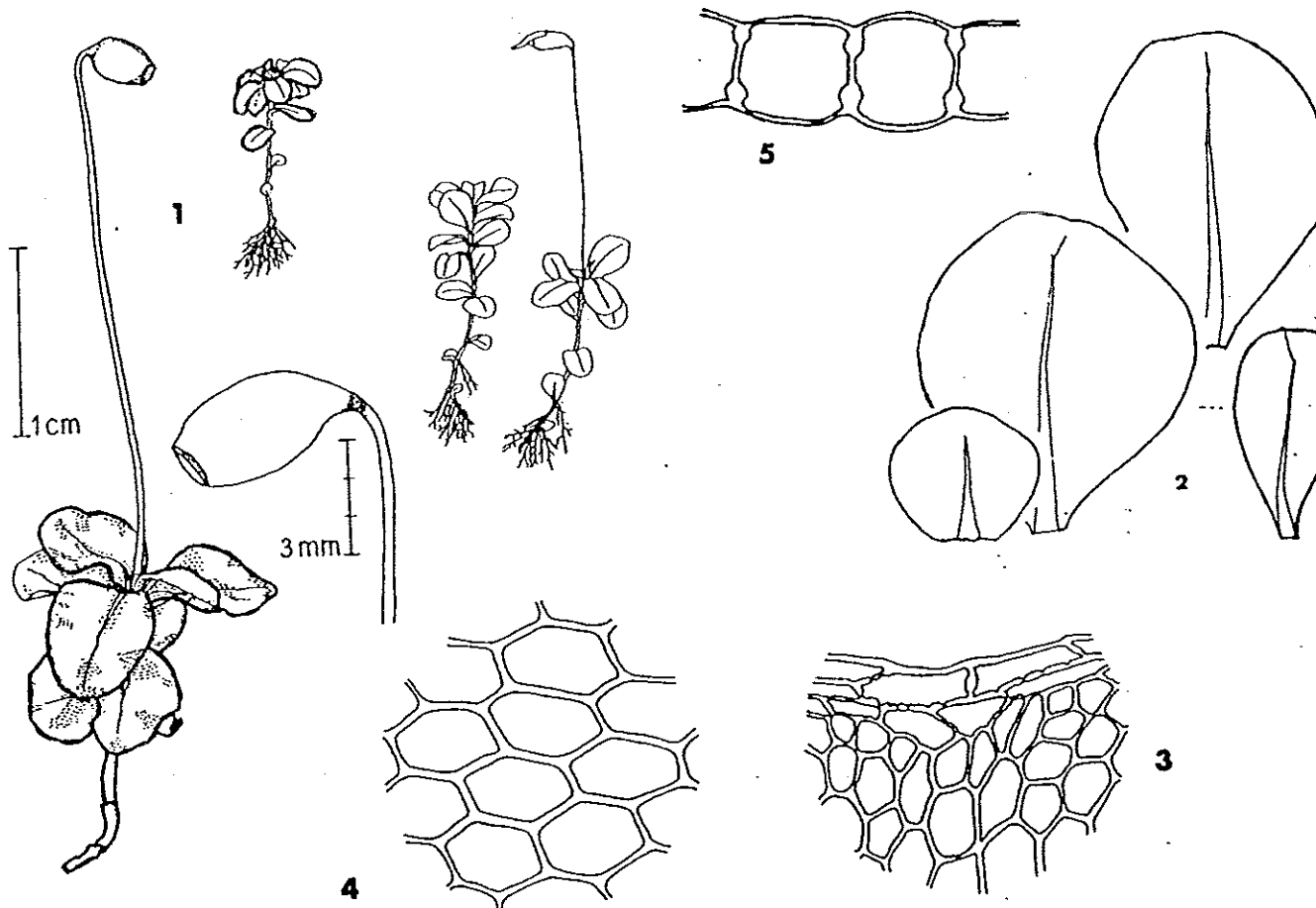
**Distinctive characters:** (1) Erect plants with large, rounded leaves, relatively unshriveled and glossy when dry, (2) large leaf cells easily visible with a hand lens, (3) stems naked, with rhizoids confined to base, (4) growing in moist but not wet areas, and (5) median leaf cells in cross-section with walls between adjacent cells looking like old-fashioned weightlifter's barbells.

**Similar species:** *Rhizomnium glabrescens*, common on rotting wood, humus and soil at low to middle elevations, has (1) leaves elliptical to obovate, about twice as long as wide, dull and shriveled when dry, and (2) stems nearly black, with rhizoids only at the base. *Rhizomnium magnifolium* [= *R. perssonii* in Lawton 1971] grows in wet, shrubby areas around montane mires, and in forested seeps and springs, where it occurs on wet soil, wet rocks and wet rotten wood, all wetter habitats than *R. nudum*. It has (1) stems to 10 cm tall, densely matted with rhizoids for most of their length, and (2) leaves lacking an apiculus, but contorted when dry. *Rhizomnium punctatum* is very similar in appearance and habitat to *R. magnifolium*, having (1) stems to 12 cm tall, densely matted with rhizoids for most of their length, and (2) leaves contorted when dry, but with a distinct apiculus. *Rhizomnium pseudopunctatum*, a small species of montane peatlands, has (1) leaves dull, contorted and incurved when dry, (2) stems densely matted with rhizoids for most of their length, and is (3) the only *Rhizomnium* in our area that is synoicous, having both antheridia and archegonia together in the same "inflorescence."

**Other descriptions and illustrations:** Lawton 1971: 199, *Pl. 110*; Koponen 1973: 7, 8; Noguchi 1989: 534, 533.

**Notes and comments:** Koponen's (1973) key for *Rhizomnium* is more complete than that of Lawton (1971), and was reproduced in Crum and Anderson (1981) on page 611. *R. nudum* is fairly common in Washington, but is rare in Oregon.

**Conservation Issues:** Damp, shaded sites are necessary for this species' survival. Trampling by hikers, horses and cows at stream crossings and watering holes could endanger some populations. Known sites should be checked to reconfirm presence of populations, and likely habitats searched for new populations. Populations may be adequately protected by stream and wetland buffers, or in designated wilderness areas.



*Rhizomnium nudum* -- 1. Plants. -- 2. Leaves. -- 3. Cells at tip of leaf. -- 4. Cells in middle of leaf. -- 5. Cross-section of cells from middle of leaf, showing barbell-shaped cross-walls. From Lawton (1971), Koponen (1973) and Noguchi (1989). Reprinted with permission of the Finnish Zoological and Botanical Publishing Board, and the Hattori Botanical Laboratory.